

Rosemount 3051S Series of Instrumentation

Scalable Pressure, Flow, and Level Solutions



Our Commitment. Your Success.

ROSEMOUNT


EMERSON[™]
Process Management

Achieve unparalleled efficiency and productivity

Maximize your success with the Rosemount 3051S Series of Instrumentation through faster start-ups, reduced operating costs, and higher efficiency and productivity. With the latest in Smart Wireless, MultiVariable and Advanced Diagnostics technologies, the 3051S does more than measure pressure.



Precision pressure, flow and level solutions start with the Rosemount 3051S SuperModule® Platform. The robust design ensures the highest field reliability while delivering the industry's best performance. Extend this winning combination into an unequalled portfolio of solutions to help you increase efficiency and productivity.

Extend Your Information Reach with Wireless



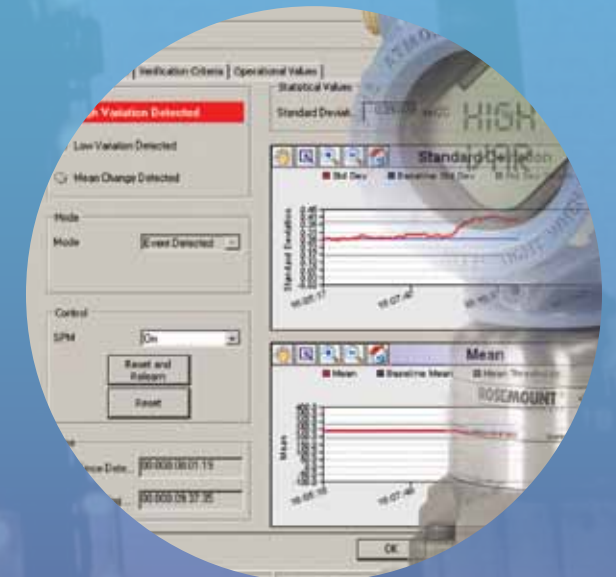
Smart Wireless solutions eliminate blind spots that previously were too difficult or expensive to instrument. Promising a decade of maintenance-free operation, the Rosemount 3051S Wireless offering allows you to cost effectively implement wireless with confidence.

Optimize Your Results with MultiVariable Measurement



Achieve unprecedented flow performance, including enhanced energy management, with the Rosemount 3051S MultiVariable™ Mass Flow offering. Our integrated flowmeters make tighter control, increased environmental protection, improved productivity and reduced material costs effortless.

Predict and Prevent Abnormal Process Conditions



Enhance quality and improve productivity with Rosemount 3051S Advanced Diagnostics. Measure and log statistical process characteristics to proactively monitor, detect and alert you to abnormal conditions.

Begin with the Innovative Scalable Platform

The Rosemount 3051S, the world's only scalable platform, provides a foundation for integrated pressure, flow and level solutions. It allows you to optimize performance, functionality and process connections for your application. The scalable architecture delivers state-of-the-art technology today and a migration path to future innovations.

Achieve faster start-up and safer operation

CONNECTIVITY

- Seamless system integration with HART™, WirelessHART™ and FOUNDATION™ fieldbus
- Remote display and interface enables direct mounting with easy, at-grade access
- Wireless offering enables new measurement points in minutes



Increase competitiveness with enhanced field intelligence

PLANTWEB FUNCTIONALITY

- Multivariable measurement improves flow performance
- Advanced diagnostics detect abnormal process conditions
- FOUNDATION fieldbus control and advanced computations enable higher plant performance



Optimize productivity with industry leading reliability and performance

SUPERMODULE PLATFORM

- All-welded hermetic SST design ensures highest field reliability
- Ultra and Ultra for Flow provide the highest performance, 10-year stability and a 12-year limited warranty
- IEC 61508 safety certification simplifies compliance



Lower project and operating costs in your pressure, flow and level applications

PROCESS CONNECTIONS

- A complete line of flanges, manifolds, diaphragm seals and flow elements
- Installation-ready solutions arrive fully assembled, leak-tested and calibrated



Extend Industry Leading Capabilities to Wireless

Based on the industry standard, WirelessHART, the Rosemount 3051S Wireless offering enables you to confidently instrument new applications. The proven and scalable SuperModule Platform extends industry-leading performance and reliability to wireless.



Maintenance-free performance

Deploy wireless pressure, flow and level solutions with SmartPower™ innovations to realize a decade of maintenance-free performance.

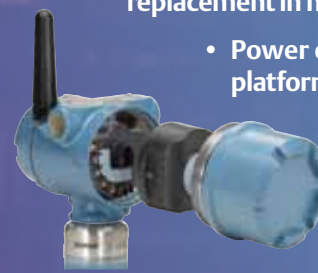
- 10-year Power Module life
- 10-year stability
- 12-year limited warranty



SmartPower innovations

The Power Module is the only wireless power solution optimized for both user and process safety.

- Intrinsically safe design for easy field replacement in hazardous areas
- Power optimized SuperModule platform delivers long life
- Sealed casing with integral, short circuit protection delivers maximum reliability and safe handling



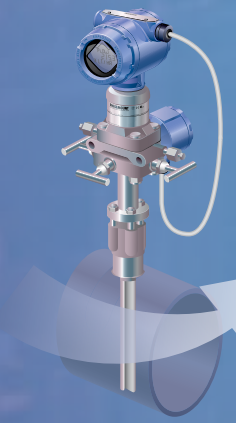
Make MultiVariable Measurement Easy

Simplify mass and energy flow measurement with the enhanced software capabilities of the Rosemount 3051S MultiVariable offering. Our advanced compensation techniques provide faster and more accurate calculations. Configuration is an easy, three-step process that eliminates guesswork. The result is effortless flow optimization for tighter control.



We do the work for you

- YOU ENTER
- 1 Process fluid
 - 2 Primary element
 - 3 Line size



- YOU RECEIVE
- Mass flow
 - Volumetric flow
 - Energy flow
 - Totalized flow
 - Process temperature
 - Differential and Static pressure

Improve flow performance

IMPROVED FLOW COMPUTATION

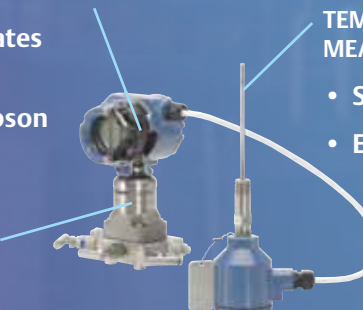
- 22 flow updates per second
- Joule-Thompson correction

ENHANCED TEMPERATURE MEASUREMENT

- Sensor matching
- Easy installation

PROVEN SUPERMODULE PLATFORM

- Ultra for Flow
- True gage or absolute measurement



THE RIGHT SOLUTION FOR YOUR APPLICATION



GAS, NATURAL GAS, AND STEAM
Fully compensated mass, energy and actual volumetric flow



SATURATED STEAM
Pressure compensated



LIQUIDS AND SATURATED STEAM
Temperature compensated



STABLE LIQUIDS
Compensated discharge coefficient

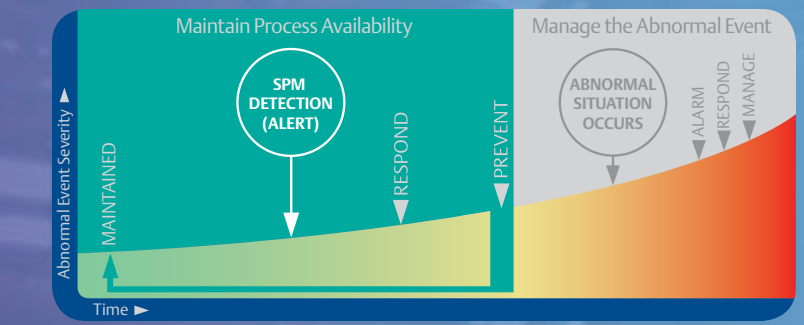
Gain Insight with Advanced Process Diagnostics

Historically, pressure transmitter diagnostics have focused exclusively on detecting internal device problems. In addition to delivering the most comprehensive device diagnostics, the Rosemount 3051S provides statistical process analysis and data logging, allowing you to prevent abnormal situations and increase plant productivity.



Prevent abnormal situations

Statistical Process Monitoring (SPM) technology proactively monitors process characteristics to detect and alert you to abnormal situations so you can maintain process availability.

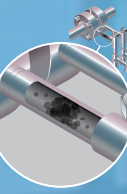


Increase plant productivity

Capturing of process conditions with timestamp capability allows you to investigate performance anomalies and find process inefficiencies.



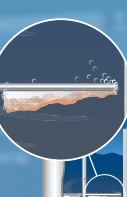
DRAFT PRESSURE
Flame instability



PRESSURE
Plugged Line



FLOW
Entrained air



LEVEL
Agitation loss

PREDICT AND PREVENT ABNORMAL SITUATIONS

Achieve More with Rosemount 3051S Series of Instrumentation

The Rosemount 3051S powers the PlantWeb architecture through our best innovative technology, implementation practices and field intelligence for better decision making to help you achieve unparalleled efficiency and productivity.



LEVERAGE INNOVATIVE TECHNOLOGY



1. Connectivity

FLEXIBILITY FOR RELIABLE COMMISSIONING AND OPERATION

- Integrate seamlessly with standards-based HART®, FOUNDATION™ fieldbus and WirelessHART™ protocols
- Upgrade to innovative technologies with the scalable platform
- Enable direct mounting and at-grade access with remote display and interface

2. PlantWeb Functionality

INTELLIGENCE TO IMPROVE PLANT PERFORMANCE

- Achieve 5x improvement in flow performance with multivariable calculations
- Gain process insight with advanced diagnostics
- Realize higher plant performance with FOUNDATION fieldbus control and advanced computations

3. SuperModule Platform

PERFORMANCE AND RELIABILITY TO OPTIMIZE PRODUCTIVITY

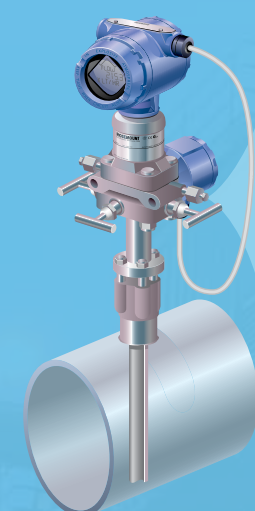
- Achieve 0.025% accuracy with the advanced Saturn™ dual-capacitance sensor
- Ensure highest field reliability with the all-welded, hermetic SST design backed by a 10-year stability and 12-year limited warranty
- True gage or absolute pressure measurement in the MultiVariable platform

4. Process Connections

INSTALLATION-READY PRESSURE, FLOW, AND LEVEL SOLUTIONS

- Standardize on compact, rugged and versatile Coplanar™ platform
- Accelerate start-up with seamless integration of flanges, manifolds, diaphragm seals and flow elements
- Reduce maintenance and enhance safety with direct mount capabilities

IMPLEMENT BEST PRACTICES

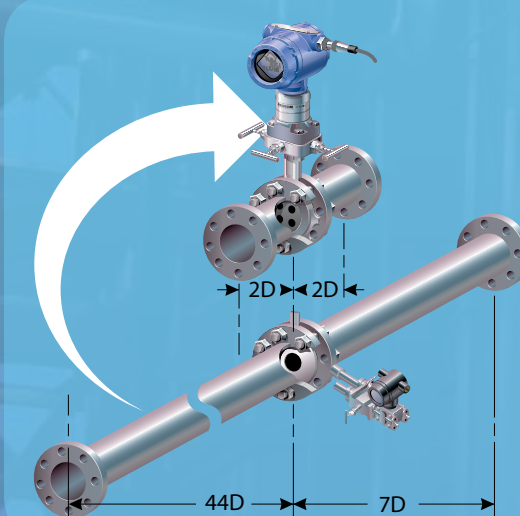


- 1 Flow Computer
- 2 Primary Element
- 3 Connection Hardware
- 4 Temperature Transmitter
- 5 Temperature Sensor
- 6 Thermowell
- 7 Sensor Wiring
- 8 Pressure Transmitter
- 9 DP Transmitter
- 10 Manifold

Streamline Flow Instrumentation

MULTIVARIABLE MEASUREMENT

- Lower engineering, design, procurement and installed costs by replacing 10 devices with one integrated flowmeter
- Improve performance, reduce maintenance costs and decrease risk of potential fugitive emissions by eliminating impulse lines



Minimize Pipe Straight-Run

COMPACT CONDITIONING ORIFICE FLOWMETER

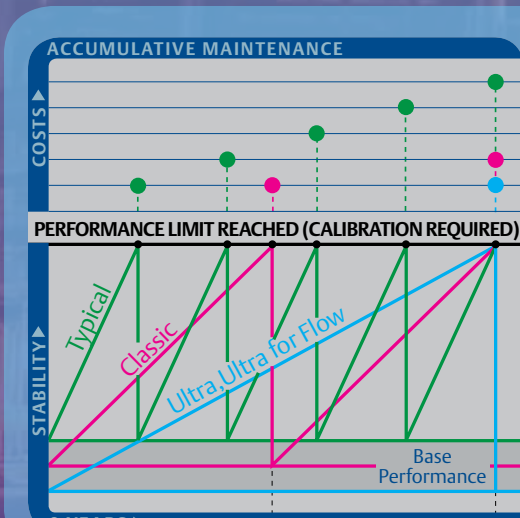
- Reduce straight pipe requirements by up to 90%
- Achieve 10 times greater performance with Ultra for Flow
- Increase reliability and simplify installation with a direct-mount flowmeter platform



Lower Installed Costs

TUNED-SYSTEM™ LEVEL SOLUTIONS

- Improve seal system temperature effects and time response
- Eliminate uncertainty with quantified performance reports
- Simplify installation and reduce cost by 20%



Reduce Maintenance Costs

ULTRA AND ULTRA FOR FLOW

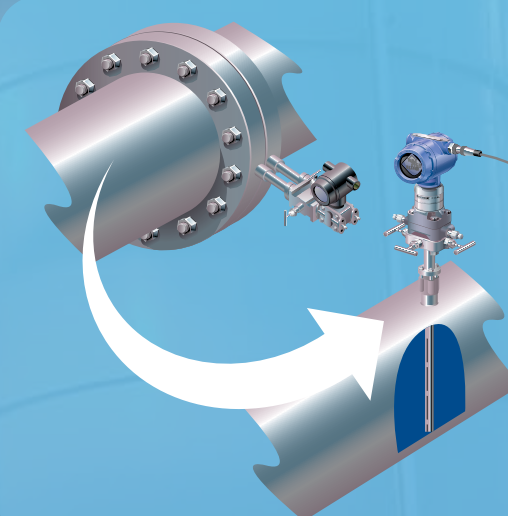
- Save up to 80% per point by eliminating unnecessary calibrations
- Eliminate transmitter stacking with improved performance over a wider turndown



Maximize Wireless Benefits

INDUSTRY'S FIRST WIRELESSHART OFFERING

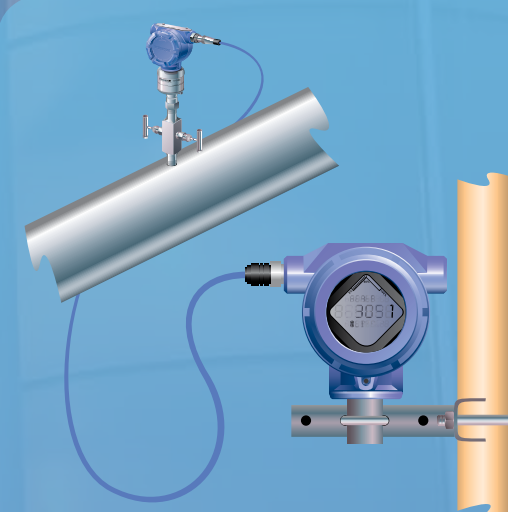
- Achieve highest return on investment with 10-year Power Module life and 10-year stability
- Reduce installation and start-up costs with fully integrated assemblies
- Reduce maintenance costs with fast and easy field replacement of intrinsically safe Power Module



Minimize Permanent Pressure Loss

ANNUBAR® FLOWMETER

- Decrease annual energy costs by up to 95%
- Reduce total installed cost by up to 35% with direct-mount insertion technology
- Increase plant uptime with maintenance-free design



Implement Direct Mounting

REMOTE DISPLAY AND INTERFACE

- Eliminate problematic impulse lines and obtain easy access to device information, diagnostics and configuration with at-grade display

INTEGRAL MANIFOLDS

- Installation-ready manifolds are factory assembled and leak-tested

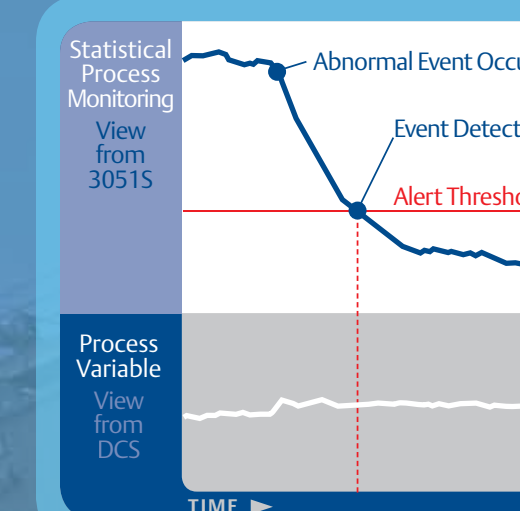


Simplify IEC 61511 Compliance

SAFETY CERTIFIED

- Reduce maintenance with high reliability and long intervals between proof tests
- Validate compliance with certified documentation

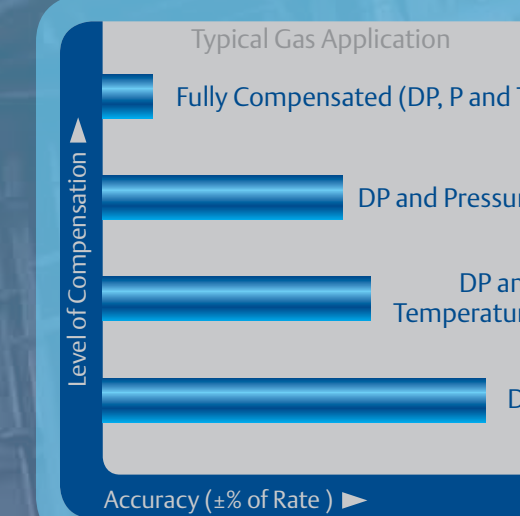
MAKE BETTER DECISIONS



Prevent Abnormal Situations

ADVANCED DIAGNOSTICS

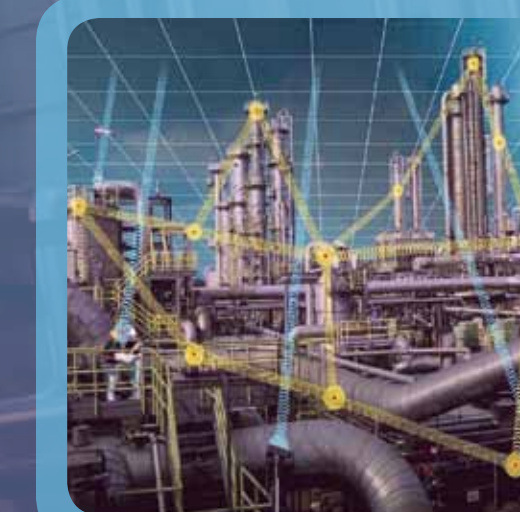
- Gain greater insight into process characteristics
- Improve plant availability with early warning of abnormal situations
- Identify process improvement opportunities with statistical process monitoring



Improve Flow Measurement

MULTIVARIABLE

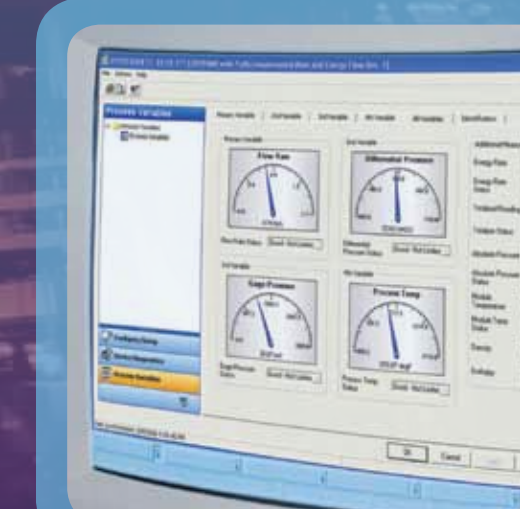
- Achieve 5 times greater flow performance with full compensation of over 25 different parameters
- Simplify mass, energy, volumetric and totalized flow measurement
- Gain tighter control with improved repeatability



Expand Your Insight

INDUSTRY STANDARD, WIRELESSHART SOLUTIONS

- Optimize process unit efficiency
- Minimize maintenance and extend the life of assets
- Meet personnel safety and environmental goals



Easy Access to Information

INTUITIVE GRAPHICAL USER INTERFACE

- Decrease start-up time with guided configuration tools
- Increase uptime by utilizing graphical guided troubleshooting
- Optimize overall productivity with intuitive task-based navigation and smart graphics

ROSEMOUNT 3051S SERIES OF INSTRUMENTATION

For more information about 3051S, view these documents online at Rosemount.com

Rosemount Measurement Technologies
00803-0100-6114

Smart Wireless Field Network Solutions
00803-0100-6129

Rosemount 3051SMV MultiVariable
00803-0100-4803

Rosemount 3051S Advanced Diagnostics
00803-0200-4801

Rosemount Annubar Series DP Flow
00803-0100-6113

Rosemount Orifice Series DP Flow
00803-0100-6115

Rosemount DP Level
00803-0100-6083

Rosemount Safety Instrumented Systems
00803-0100-6127

Pressure

Flow

Level

Wireless

Advanced Diagnostics

Optimized Performance

Application Based Solutions

Safety Certified

MultiVariable

Increased Functionality

Installation Ready

Field Upgradable

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